



Utilizing Drupal, an Open Source Web Framework to Support Science 2.0 Projects

Ajinkya Kulkarni

#Drupal, #JavaScript, #PHP, #CSS

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- Web Developer (or Research Associate) at Information Technology and Systems Center , University of Alabama in Huntsville
- Front end and back end Drupal developer since December 2009 (2+ years)




- What I will cover:
 - What is Drupal? Content management system or an application development framework? (Hint: both)
 - Building Science 2.0 applications using Web 2.0 features of Drupal
 - Showcase of few Science 2.0 applications built using Drupal at University of Alabama in Huntsville
- What I will not cover:
 - Drupal vs. other content management systems
 - Drupal vs. other application development frameworks



What is Drupal?

Drupal is a free and highly configurable open source
and an application development framework
content management system (CMS) written in PHP and
distributed under the GNU General Public License.

New to Drupal? Know what is Drupal in 57 seconds: <http://youtu.be/rF1X12PE6PY>



Building Science 2.0 applications using Web 2.0 features

Some Web 2.0 Features of Drupal

- User management (including registration, permissions)
- Content management
- Tagging
- Social sharing
- Email notifications
- Searching
- Threaded comments
- Analytics
- Caching
- RSS
- Mashups
- Maps
- Blogs





Drupal : Not just a CMS!

Beyond CMS: Using Drupal as Application Development Framework

- Started as a CMS but rapidly growing into a full blown application development framework
- 7000+ contributed modules
- Robust and developer friendly APIs
- Follows the best coding practices and guidelines
- Active security auditing of modules
- Drupal 8: HTML5 and mobile friendly
- Freely available open source developer tools (Netbeans, xDebug, PHP, MySQL, Apache, Ubuntu, Drush, Git, Firebug)

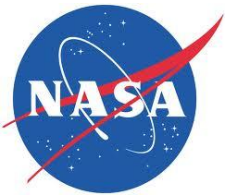
Doing Drupal Development is Easy!

- Drupal module development books
- [Online API reference](#)
- Community Support : “[Drupal Answers](#)” and “[StackOverflow](#)”
- Local Drupal groups





Science on Drupal



GPM Cold-season Precipitation Experiment (GCPEX) Portal

About GCPEX: <http://pmm.nasa.gov/GCPEX>

GCPEX Drupal Portal : <http://gpm.nsstc.nasa.gov/gcpex/portal/>

SEARCH

Search this site:

Search

DATA AND REPORTS

Jump to mission calendar:

Jan 2012Feb 2012

March						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
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NAVIGATION

- Portal Home
- Image Galleries
- Schedules
 - Daily Meeting Schedule
 - Deployment Schedules
 - Integrated Flight Schedules
- Forecaster Resources
- Weather Forecasts
- Mission Reports
 - Instrument/Platform Scientist Reports

Click here to view [timeline view](#).

To subscribe for email notifications [click here](#).

Daily Meeting Schedule

0830* Forecaster and Mission Scientist Discussion ops discussion for day-0 (Lead Forecaster/Mission Scientists)

* time will adjust as missions and POD dictate.

1030 Mission Briefing/Plan of Day Discussion (Adobe Connect/Telecon)

Email with telecon number and Adobe connect info sent to mailing list

[+Edit Daily Meeting Schedule](#)

88 reads

Plan of the Day

26 February 2012 - Update **LATEST**
Sunday, February 26, 2012

We briefed the Citation that they are done for the experiment - thanks to them and the DC-8 and Convair for an excellent set of flights.

The forecast operations will end as of now.

A telecon for...

Instrument/Platform Scientist Reports

Huronia Webcamupdated on 02/05/2012

[\[-\] Morton](#)

Morton 2DVD SN25updated on 03/01/2012

Morton Hot Plateupdated on 01/14/2012

Morton Met Towerupdated on 02/05/2012

Morton MRRupdated on 02/05/2012

Morton Parsivel Disdrometersupdated on 03/01/2012

Morton Pluvioupdated on 02/19/2012

Morton Webcamupdated on 02/05/2012

[+Post new Instrument/Platform Scientist Report](#)

more

Mission Scientist Reports

PLAN OF THE DAY

- 26 February 2012 - Update Updated on: 02/26/2012 - 15:16 **LATEST**
 - 25 February 2012 Updated on: 02/25/2012 - 11:17
 - 24 February 2012 Updated on: 02/24/2012 - 04:13
- [+Post new Plan of the Day](#)
- more

WEATHER FORECASTS

Sun, 02/26/12 Morning -
Sat, 02/25/12 Morning -
Fri, 02/24/12 Morning -
Thu, 02/23/12 Morning -
Wed, 02/22/12 Morning -
Tue, 02/21/12 Morning -

[+Post new Forecast](#)

more

MISSION PLANNING & LOGISTICS

Lessons Learned GCPEX Mission Planning 5 Feb
GCPEX KMZ file
Flight Boxes
XChat login for RTMM
RTMM Contact Sheet

[+Post new Mission Planning & Logistics](#)

more

Blocks

PLAN OF THE DAY

1. 26 February 2012 - Update Updated on: 02/26/2012 - 15:16 **LATEST**
2. 25 February 2012 Updated on: 02/25/2012 - 11:17
3. 24 February 2012 Updated on: 02/24/2012 - 04:13

[more](#)

[+ Post new Plan of the Day](#)

WEATHER FORECASTS

Sun, 02/26/12 Morning -
Sat, 02/25/12 Morning -
Fri, 02/24/12 Morning -
Thu, 02/23/12 Morning -
Wed, 02/22/12 Morning -
Tue, 02/21/12 Morning -

[more](#)

[+ Post new Forecast](#)

MISSION PLANNING & LOGISTICS

Lessons Learned GCPEX Missiong Planning 5 Feb
GCPEX KMZ file
Flight Boxes
XChat login for RTMM
RTMM Contact Sheet

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Views

Mission Scientist Reports

Title	Post date
27 February 2012 - Lake Effect over CARE	02/29/2012 - 07:39
24 February 2012 - Stop planning your life...live it	02/25/2012 - 15:54
25 February 2012 - Lake Effect Snow on DC-8 Transit	02/25/2012 - 15:58
21 February MS Report	02/21/2012 - 19:45
20 February MS Report - clear air success	02/20/2012 - 11:37
18 February MS Report: The little storm that could	02/19/2012 - 16:18
14 February 2012: Gotta ♥ Satellite Under-flights!	02/14/2012 - 18:27
16 February 2012: Splitting synoptic system with good stratiform over water	02/16/2012 - 15:12
10 February MS Report: Light synoptic snow with cold front	02/11/2012 - 09:13
11 February MS Report: Long-lived lake effect snow off Georgian Bay	02/14/2012 - 12:04
12 February MS Report: Extensive Sampling of the End of the Lake-effect Event	02/13/2012 - 13:39
13 February MS Report: No Flights	02/13/2012 - 15:30
6 February MS Report	02/08/2012 - 08:56
4 February MS Report	02/04/2012 - 13:51
30 January MS Report WITH INSTRUMENT QUICK-LOOK IMAGES	02/02/2012 - 14:49
1 February MS Report	02/02/2012 - 13:42
31 January MS Report	02/02/2012 - 13:40
31 January MS Report	01/31/2012 - 16:17
30 January MS Report	01/31/2012 - 16:09
29 January MS Report	01/31/2012 - 16:13
28 January MS Report	01/28/2012 - 17:39

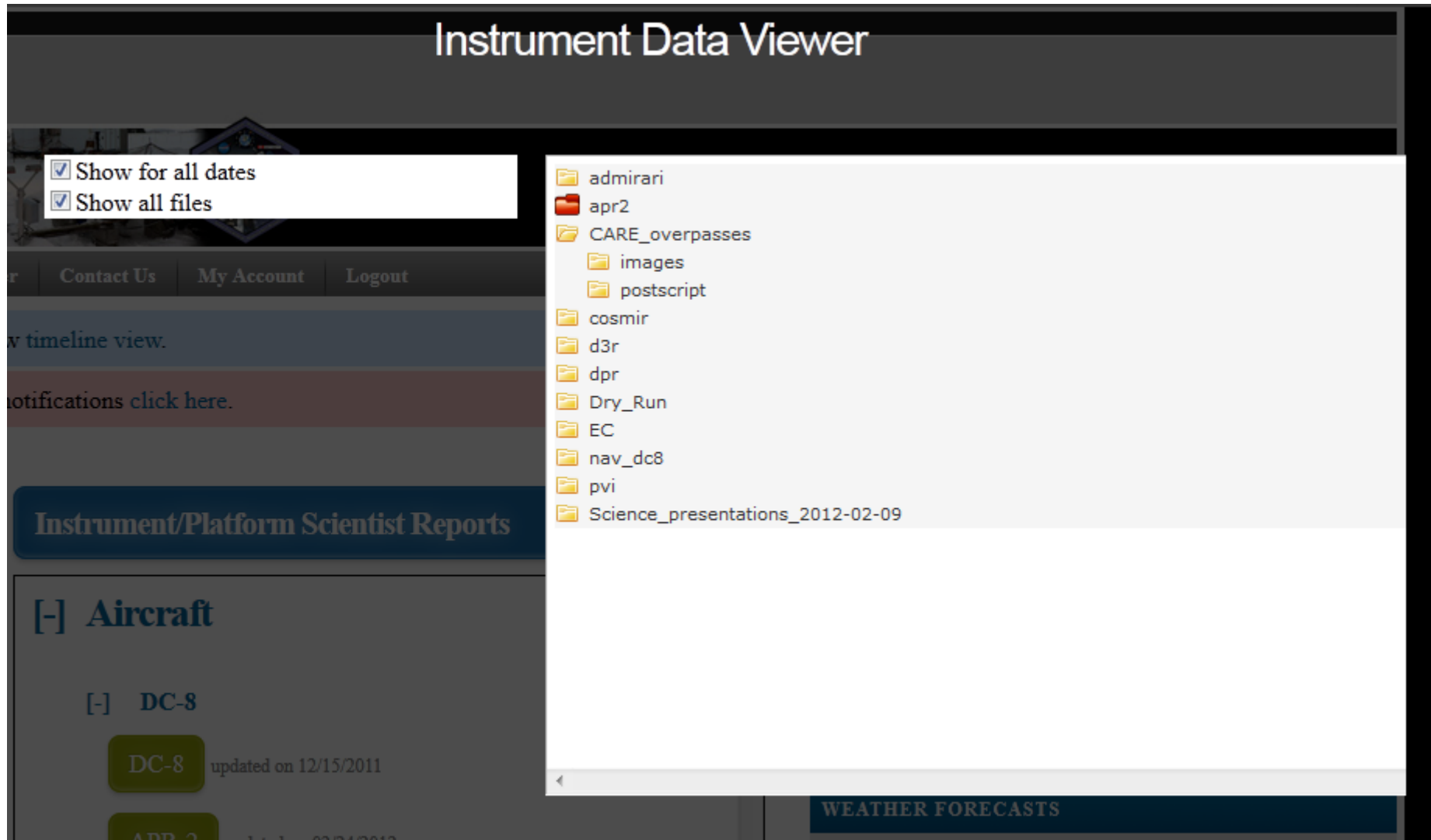
Roles and Permissions

Permission	anonymous user	authenticated user	admin	Campaign Team Member	Forecaster	Forum Moderator	Instrument Team Member	Mission Manager	Mission Scientist	Pilot	Platform Scientist	Project Manager	Publicity Person
node module													
access content	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
administer content types	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
administer nodes	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
create announcement content	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
create approved_flightplan content	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
create book content	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
create data_file content	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
create deployment_schedules content	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
create event content	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
create flight_plan content	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
create flightschedule content	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
create forecast content	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
create gepage content	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
create instrument_report content	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
create logistics content	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
create mission_manager_report content	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
create mission_planning content	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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Instrument Data Viewer



Weather Forecast Content Type

[Home](#) » [Create content](#)

Create Weather Forecast

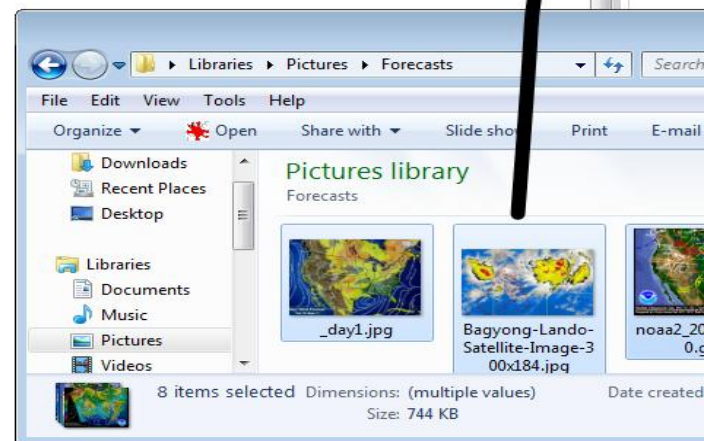
Instructions: Enter the summary of all forecasts in the Summary field and individual forecast in the Forecast block. The summary you enter in Summary field will be used to display teaser view on Forecast Dashboard

Title: *

Summary:

☒ Show summary in full view

The screenshot shows the 'Create Weather Forecast' content type editor. It features a rich text editor with a toolbar containing various formatting options like bold, italic, underline, and font color. Below the toolbar is a red bar with a 'Drop files here to upload' instruction and a 'FILES' button. A large weather map is displayed in the main content area, with the text 'Day1 Wind Forecast Tue 13-Sep-11' at the bottom. To the right of the map is a 'Move' button. A black arrow points from the 'Move' button to a file explorer window.



Documents Sharing

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[Devel](#)

RTMM Contact Sheet

Submitted by [wpetersen](#) on Fri, 01/13/2012 - 16:49


Attachment

Size

[RTMM_REVEAL_Contact_Info_12Jan2012.pptx](#)

RTMM_REVEAL_Co...pptx

[Save](#) | [Export](#) | [SlideShow](#) | [Print](#)

powered by 

Aircraft Tracking - Real Time Mission Monitor and REVEAL

Name	Position	Phone/Fax	Email
Michael Goodman	RTMM PI	256-961-7890 office 218-230-8217 cell	michael.goodman@nasa.gov
Paul Meyer	RTMM Co-I	256-961-7892 office 256-426-9951 cell	paul.meyer@nasa.gov
John Hall	RTMM Developer	256-961-7972 office	john.hall@nasa.gov
Matt He	RTMM Developer	256-961-7732 office 256-289-0433 cell	mhe@lsc.usf.edu
Jared Harper	RTMM Database	256-961-7941 office	jharper@lsc.usf.edu
Michele Garrett	RTMM System Administrator	256-961-7926 office 256-651-6448 cell	mgarrett@lsc.usf.edu
David Tow	REVEAL Manager	661-276-3552 office	david.tow-1@nasa.gov
Sky Yarbrough	REVEAL Engineer	661-276-2874 office 661-816-4529 cell	sky.yarbrough-1@nasa.gov

84.89 KB

 [Add new comment](#) 31 reads

Real Time Mission Monitor (RTMM)

[Home](#)

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KAPX Elev 01



Submitted by [mhe](#) on Sun, 12/18/2011 - 15:24

[Add new comment](#) 28 reads



Mid-latitude Continental Convective Clouds Experiment (MC3E) Portal

About MC3E: <http://pmm.nasa.gov/science/ground-validation/mid-latitude-continental-convective-clouds-experiment-mc3e>

MC3E Drupal Portal: <http://mc3e.nsstc.nasa.gov/portal/>

GPM Ground Validation Data Portal



View Data

[Portal Home](#) [About Field Campaign](#) [RTMM_2ndGen](#) [RTMM_Classic](#) [Forecaster Resources](#) [Flight Tracker](#) [Contact Us](#) [My Account](#) [Logout](#)

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Search

DATA AND REPORTS

March						
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- Weather Forecasts
- Mission Reports
 - Instrument/Platform Scientist Reports
 - Mission Manager Flight Reports
 - Mission Scientist Reports

To subscribe for email notifications [click here](#).

Daily Meeting Schedule

APRIL 18-20: 09:30 CDT Forecast Discussion (Telecon)

APRIL 21- END

08:00 CDT: Wx Forecaster/Mission Scientist meeting at KCI Aviation, Ponca City Airport

09:00 CDT: Ops telecon: Weather Briefing, Ops Planning

[SEE MISSION PLANNING LINKS FOR CONNECT INFO](#)

16:00 CDT: Wx Forecast update

[+ Edit Daily Meeting Schedule](#)

Plan of the Day

POD 3 June - 6 June **LATEST**

Friday, June 3, 2011

Flight ops ended 6/2 and aircraft are headed home (Citation last night ER-2 this morning). Kudos to everyone for a great run!

Plan is to provide daily forecast on the portal through 6/5 but no longer hold 9 AM telecons.

Though we are expecting no precipitation

Instrument/Platform Scientist Reports

Instrument	Status	Report Title	Updated date
APU	Green	Status	06/01/2011
2DVD	Green	Status	06/01/2011
MRR2	Green	Status	06/01/2011
HIWRAP	Green	Status	05/30/2011
AMPR	Yellow	Status	05/29/2011
D3R	Yellow	Status	05/24/2011
NPOL	Green	NPOL Status	05/24/2011
MAPIR	Green	Status	06/01/2011
CoSMIR	Green	Status	05/12/2011
	Green	NPOL status	05/11/2011
Radiosonde	Green	Sonde schedule	05/08/2011
Citation	Green	April 25 Mission	04/25/2011

PLAN OF THE DAY

- POD 3 June - 6 June
Updated on: 06/03/2011 - 07:28
LATEST
- JUNE 1 POD
Updated on: 06/01/2011 - 09:48
- MAY 31 POD (UPDATE)
Updated on: 05/31/2011 - 14:55

more

[+ Post new Plan of the Day](#)

WEATHER FORECASTS

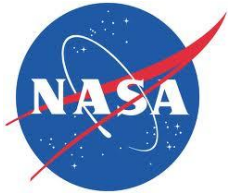
Fri, 06/03/11 Morning - Central Facility
Thu, 06/02/11 Morning - Central Facility
Wed, 06/01/11 Morning - Central Facility
Tue, 05/31/11 Morning - Central Facility
Tue, 05/31/11 Morning - Central Facility
Mon, 05/30/11 Morning - Central Facility

more

[+ Post new Forecast](#)

MISSION PLANNING & LOGISTICS

Draft Scorecard
UND Citation Alternates for landing KML file
New KML with LSM Track Template
ER-2 Post Flight Navigational Recorder Data Website
RTMM Quickstart Guide (also Xchat)



Genesis and Rapid Intensification Processes (GRIP) Portal

About GRIP: <http://grip.nsstc.nasa.gov/>

GRIP Drupal Portal: <http://grip.nsstc.nasa.gov/reporting/>

GRIP

Genesis and Rapid Intensification Processes

[Portal Home](#) [About GRIP](#) [GRIP-RTMM_2ndGen](#) [GRIP-RTMM_Classic](#) [Forecaster Resources](#) [Related Links](#) [GRIP Image Galleries](#) [Contact Us](#)

DASHBOARDS

- GRIP Default Dashboard
- Forecasters Dashboard

MY LINKS

- How to Access GRIP Data
- GRIP Image galleries
- GRIP News Gallery
- GRIP Video gallery
- Schedules
- Data Links for Forecasters
- Forecasts for Tropical Areas of Interest
- Mission Reports
- GRIP Tutorials
- Upload Data and Quiklooks

PLAN OF THE DAY

C130J POD

POD for GH

POD for WB-57

POD for DC-8

[Index of all plans](#)

LOGISTICS

Evacuation Plan
 Ft Lauderdale Orientation Package
 Fort Lauderdale Shipping Address
 GRIP Participants List
 DFRC/ Global Hawk Shipping Address

[more](#)

GRIP DEPLOYMENT SCHEDULES

GRIP Team Dashboard

Science Meeting

The GRIP Post-Mission Science Meeting will be held June 6-8, 2011, at the Embassy Suites LAX South. Meeting information is posted here. PLEASE RSVP to Marilyn Vasques (Marilyn.Vasques@nasa.gov) or Stacy Stuart (stacyc.stuart@nasa.gov) if you are attending.

Title	Date
GRIP Science Meeting June 2011	07/25/2011 - 15:58
GRIP Post-Mission Science Meeting -- General Information	03/08/2011 - 17:06

Integrated Flight Schedules

Title	Schedule for
Integrated Flight Schedule - start to finish of G-I-P	08/13/2010 - 09/30/2010
28 Sep 2010 All Aircraft Flight Graphic	08/13/2010 - 09/30/2010

Mission Manager Flight Reports

Title	Aircraft	Sortie Number	Flight Date	Take Off Time	Landing Time	Flight Hours Used
DC-8 N817NA Flight #100625	DC-8	100625	Sat, 09/25/2010	Sat, 09/25/2010 - 12:57	Sat, 09/25/2010 - 17:57	4.70
DC-8 N817NA Flight #100624	DC-8	100624	Wed, 09/22/2010	Wed, 09/22/2010 - 16:00	Wed, 09/22/2010 - 23:37	7.70
DC-8 N817NA Flight #100623	DC-8	100623	Tue, 09/21/2010	Tue, 09/21/2010 - 15:47	Tue, 09/21/2010 - 23:11	7.50
DC-8 N817NA Flight #100622	DC-8	100622	Mon, 09/20/2010	Wed, 09/22/2010 - 16:02	Wed, 09/22/2010 - 18:36	2.60

1 2 3 4 5 6 7 next last »

SEARCH

Search this site:

DATA AND REPORTS

September						
S	M	T	W	T	F	S
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11	12	13	14	15	16	17
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WEATHER FORECAST

Tropical Areas of Interest Forecast for September 24, 2010

Tropical Areas of Interest Forecast for September 23, 2010

Tropical Areas of Interest Forecast for September 22, 2010

[more forecasts](#)

GRIP-IFEX-PREDICT COORDINATION

Integrated Flight Schedule - start to finish of G-I-P

28 Sep 2010 All Aircraft Flight Graphic

Dropsonde and Upsonde Status - JULY 15

Dropsonde & Upsonde Information - JULY 12

Triagency Dropsonde System Status - June 24

[more](#)

MISSION PLANNING DOCUMENTS

Mission Calendar 080810

Updated Mission Scientist Schedule

Flight Patterns and scenarios, Revised, June 18, 2010

Data Resources in JPL GRIP Portal

Real Time Data Requirements and Capabilities - UPDATE JULY 12

[more](#)

Mission Calendar




















Calendar

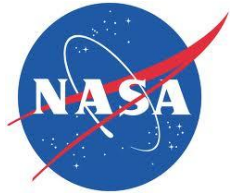
Select Type

Data File
Instrument Scientist Report
Mission Manager Report
Mission Scientist Report
Platform Scientist Report

Apply

Year Month Week Day

September 2010							Next »
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
36				1 	2 	3 	4
							
							
37	5 	6 	7 	8	9	10	11
38	12 	13 	14 	15	16 	17 	18
							
39	19	20 	21 	22 	23	24	25 
40	26	27	28	29	30		



AMSR-E Provenance Browser

About: <http://provenance.itsc.uah.edu/about>

Website: <http://provenance.itsc.uah.edu/>



Search/Browse Provenance Repository

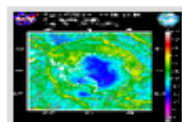
[Browse Images](#)
[Browse Files](#)
[Search Database](#)
[View Science Process](#)

Products

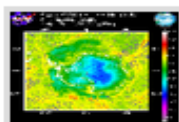


- ▶ L3 Land, Daily
- ▶ L3 Ocean, Daily
- ▶ L3 Ocean, Weekly
- ▶ L3 Ocean, Monthly
- ▶ L3 Sea Ice 6km, Daily
 - ▶ 2011
 - ▶ September(116)
 - ▶ October(16)
- ▶ L3 Sea Ice 12km, Daily
- ▶ L3 Sea Ice 25km, Daily
- ▶ L3 Snow, Daily
- ▶ L3 Snow, Pentad
- ▶ L3 Snow, Monthly

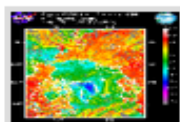
Images



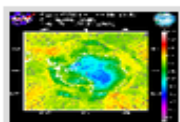
AMSR_E_L3_Se...



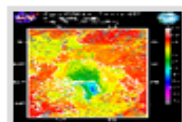
AMSR_E_L3_Se...



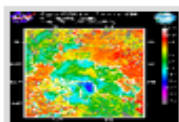
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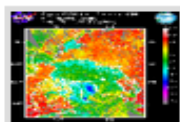
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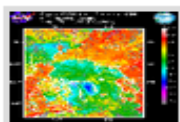
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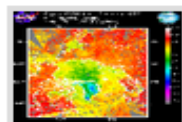
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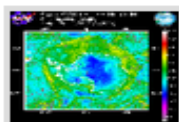
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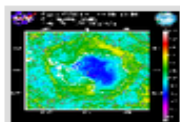
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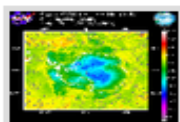
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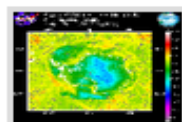
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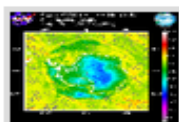
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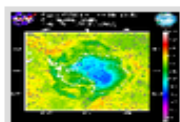
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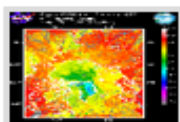
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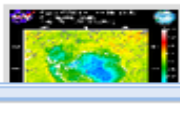
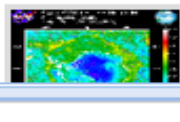
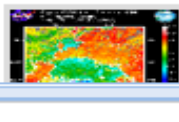
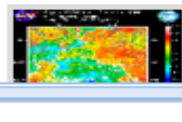
AMSR_E_L3_Se...



AMSR_E_L3_Se...



AMSR_E_L3_Se...



Navigation

[Search/Browse Provenance Repository](#)

Project Documents


Title	Author	Updated date
Examples of metadata and provenance XML documents	Helen Conover	Wed 11/0 - 15
Instant Karma Notification Guide V1.0	Prajakta Purohit	Wed 11/2 - 16
Karma Adaptor Tool User Manual	Mehmet Aktes, Yuan Luo	Wed 11/2 - 16

Datasets/Algorithms

Title	Updated date
AE_Rain	Thu, 12/08/2011 - 14:24
AE_Land	Thu, 12/08/2011 - 15:30
AE_SI25	Wed, 10/05/2011 - 08:54
AE_Land3	Thu, 12/08/2011 - 15:58
AE_SI12	Wed, 10/05/2011 - 08:54
AE_SI6	Wed, 10/05/2011 - 08:54
AE_5DSno	Mon, 10/17/2011 - 16:42
AE_L2A	Wed, 11/09/2011 - 10:57
AE_MoSno	Mon, 10/17/2011 - 16:42
AE_RnGd	Thu, 12/08/2011 - 14:57

1 2 next > last >>

Browse Images

 Earth science Lineage and Processing History
Provenance for AMSR-E

Quick Start Guide Search Earth Science

Search/Browse Provenance

Browse Images Browse Files

Products

- ▶ L3 Land, Daily
- ▶ L3 Ocean, Daily
- ▶ L3 Ocean, Weekly
- ▶ L3 Ocean, Monthly
- ▶ L3 Sea Ice 6km, Daily
 - ▶ 2011
 - ▶ September(116)
 - ▶ October(16)
- ▶ L3 Sea Ice 12km, Daily
- ▶ L3 Sea Ice 25km, Daily
- ▶ L3 Snow, Daily
- ▶ L3 Snow, Pentad
- ▶ L3 Snow, Monthly

Aqua AMSR-E - SH 6km 89H
All Passes - Daily
Date: 2011-09-25 (268)

30W 0 30E

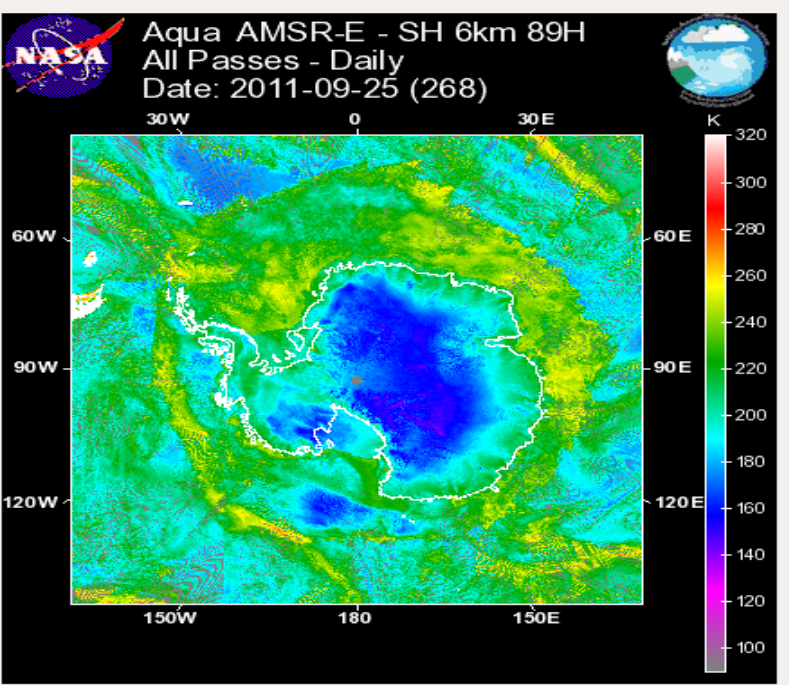
60W 90W 120W 150W 180 150E 120E 90E 60E

K 320 300 280 260 240 220 200 180 160 140 120 100

View Provenance CLOSE X

Image 1 of 116

AMSR_E_L3_Se.. AMSR_E_L3_Se.. AMSR_E_L3_Se.. AMSR_E_L3_Se..



Provenance Graph and Metadata

Zoom In Zoom Out Zoom to Fit

```
graph LR; A[AMSR_E_L3_SeaIce6km_V13_20110925.hdf] -.->|produced| C[AMSR_E_L3_SeaIce12km_V13_20110925.hdf]; B[AMSR_E_L3_SeaIce25km_V13_20110925.hdf] -.->|produced| C; C -.->|consumed| D[Input File]; E[daily] -.->|invoked| C
```

The graph illustrates the provenance of the data. It shows three input files (AMSR_E_L3_SeaIce6km_V13_20110925.hdf, AMSR_E_L3_SeaIce12km_V13_20110925.hdf, and AMSR_E_L3_SeaIce25km_V13_20110925.hdf) which are produced from a central node (AMSR_E_L3_SeaIce12km_V13_20110925.hdf). This central node is then consumed by the Input File. Additionally, a daily file is invoked by the central node.

Selected Product: AE_SI12 | Selected Parameter: None

Algorithm Information Data Fields Ancillary Files Flags Parameter Specific In

Name NT2 AMSR-E

Version 20090130

Description Enhanced NASA Team Algorithm (NT2) for AMSR-E sea ice are calculated using the individual Level 2-A swaths rather averaged brightness temperatures in order to make the corrections on an orbit-by-orbit basis before obtaining daily average ice

Applies to Parameter Sea Ice Concentration

Author Dr. Thorsten Markus thorsten.markus@nasa.gov NASA

Documentation http://nsidc.org/data/amsre/data_versions/vers

Documentation http://nsidc.org/data/amsre/pdfs/amsr_atbd_su

Data File Information: AMSR_E_L3_SeaIce12km_V13_20110925.hdf

Dataset short name	AE_SI12
ESDT version	2
Product maturity code	V
PGE version	13
Processing center	Karma testbed
Processing environment	Integration and test
Date/time file produced	2011-10-13 01:18:49
Science quality flag (text)	Passed
Science quality flag explanation	Mask files are recent
North bound in degrees	90
South bound in degrees	-90
West bound in degrees	-180
East bound in degrees	180
Percent missing data	0
Percent out-of-bounds data	0
Beginning date/time of observation	2011-09-25 00:23:28
Ending date/time of observation	2011-09-26 00:17:37

Algorithms & Parameters for AE_SI12

Parameters (4 Items)

Brightness Temperatures

Sea Ice Concentration

Sea Ice Differences

Snow Depth on Sea Ice

Algorithms (4 Items)

BBA AMSR-E

NT2 AMSR-E

Snow Depth AMSR-E

grid projection

Product Content Type

Dashboard

Content

Structure

Appearance

People

Modules

Configuration

Provenance Browser Settings

Reports

Help

Hello ajinkya

Log out

Add content

Find content

Edit shortcuts

Earth science lineage and Processing History

Create Product Provenance

My account

Log out

Home » Add content

Product Information:

Short Name

Long Name

ESDT Version

Collection Description

Filename Pattern

Delivered Algorithm Package information (DAP):

Name

Version

Product Maturity Code

File Specific Information (additional information specific to the files in this product):

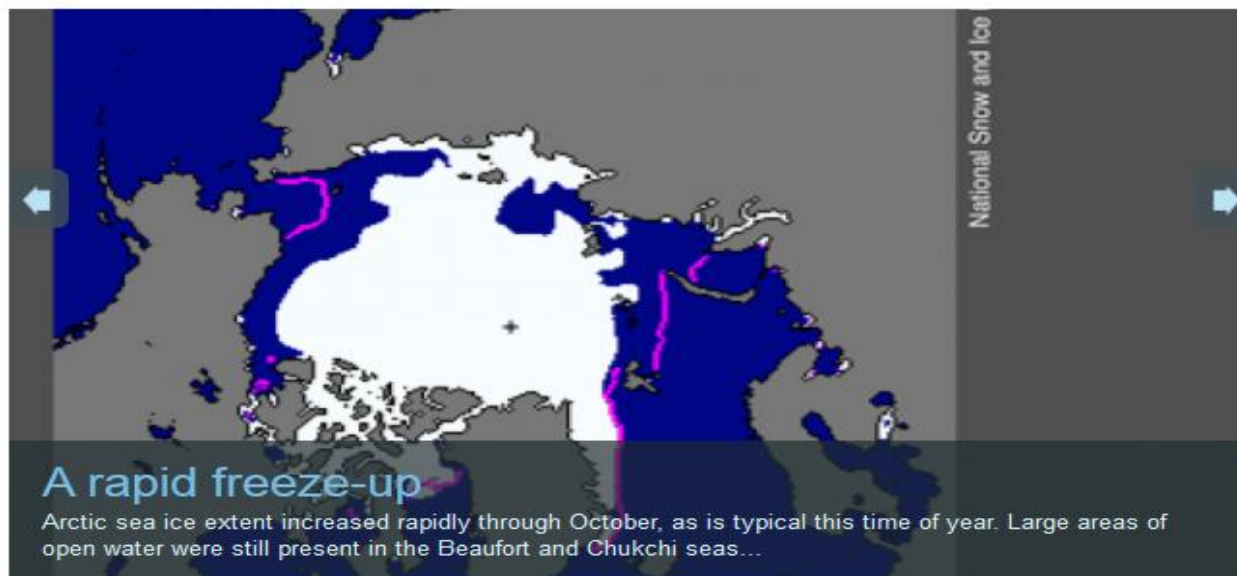
Name



Website: <http://acedemo.itsc.uah.edu/>

ARAMSS

Arctic Research and Mission Support System

[Register](#)

LATEST NEWS



Canadian military turns to volunteers for Arctic rescues



The Arctic - a growing search and rescue challenge

POPULAR

RECENT

- [GINA MODIS September 12 2011](#) (43)
- [NDBC Observations](#) (29)
- [NOAA Nautical Charts for Alaska](#) (22)
- [Topographic maps for Alaska](#) (21)
- [Marine Obs via NDBC](#) (18)
- [Populations in the United States](#) (17)
- [Alaska and Yukon Territories Station Models](#) (16)
- [University of Cologne North Pole surface map](#) (15)

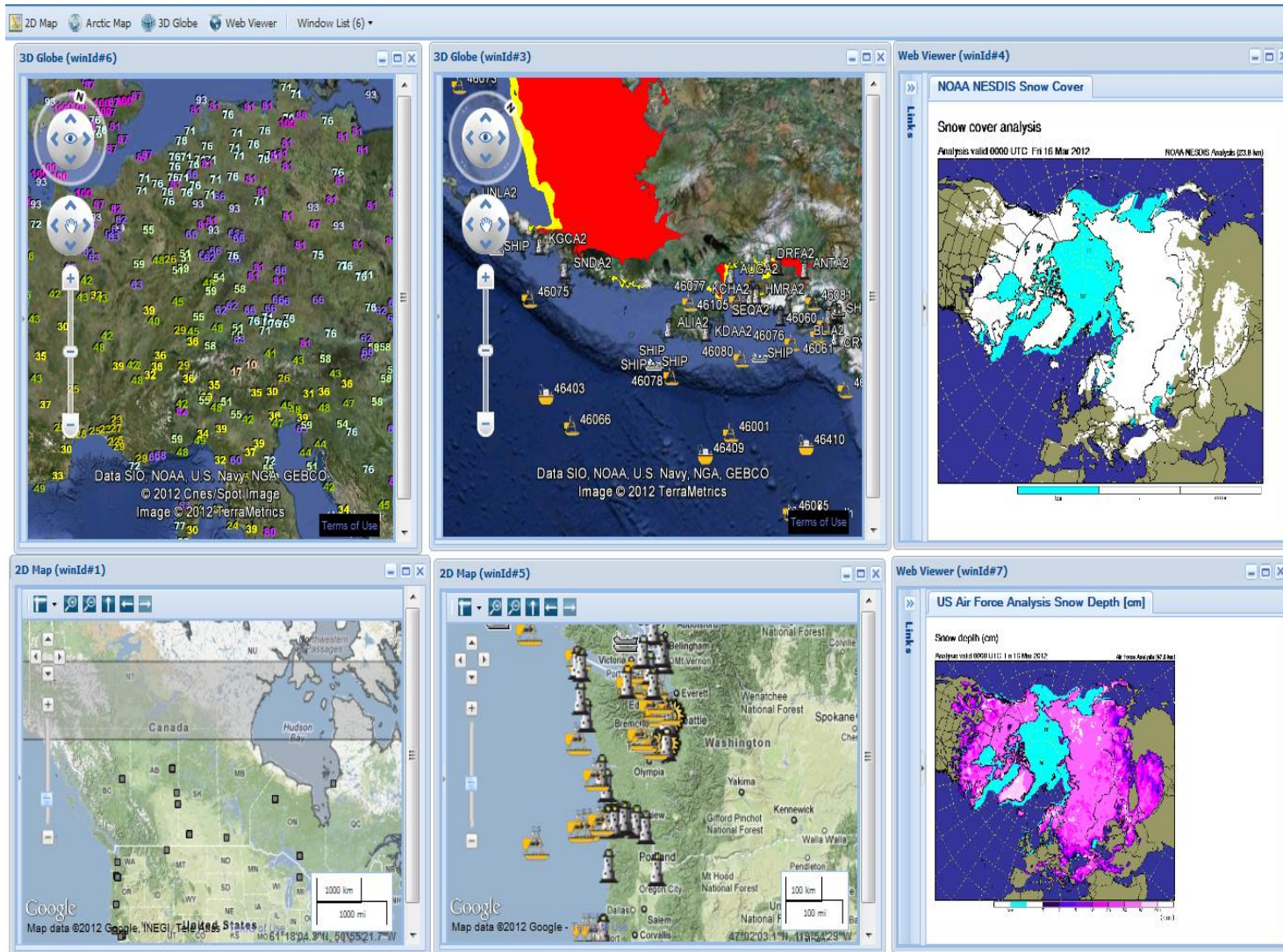
[more](#)

SEARCH CATALOG

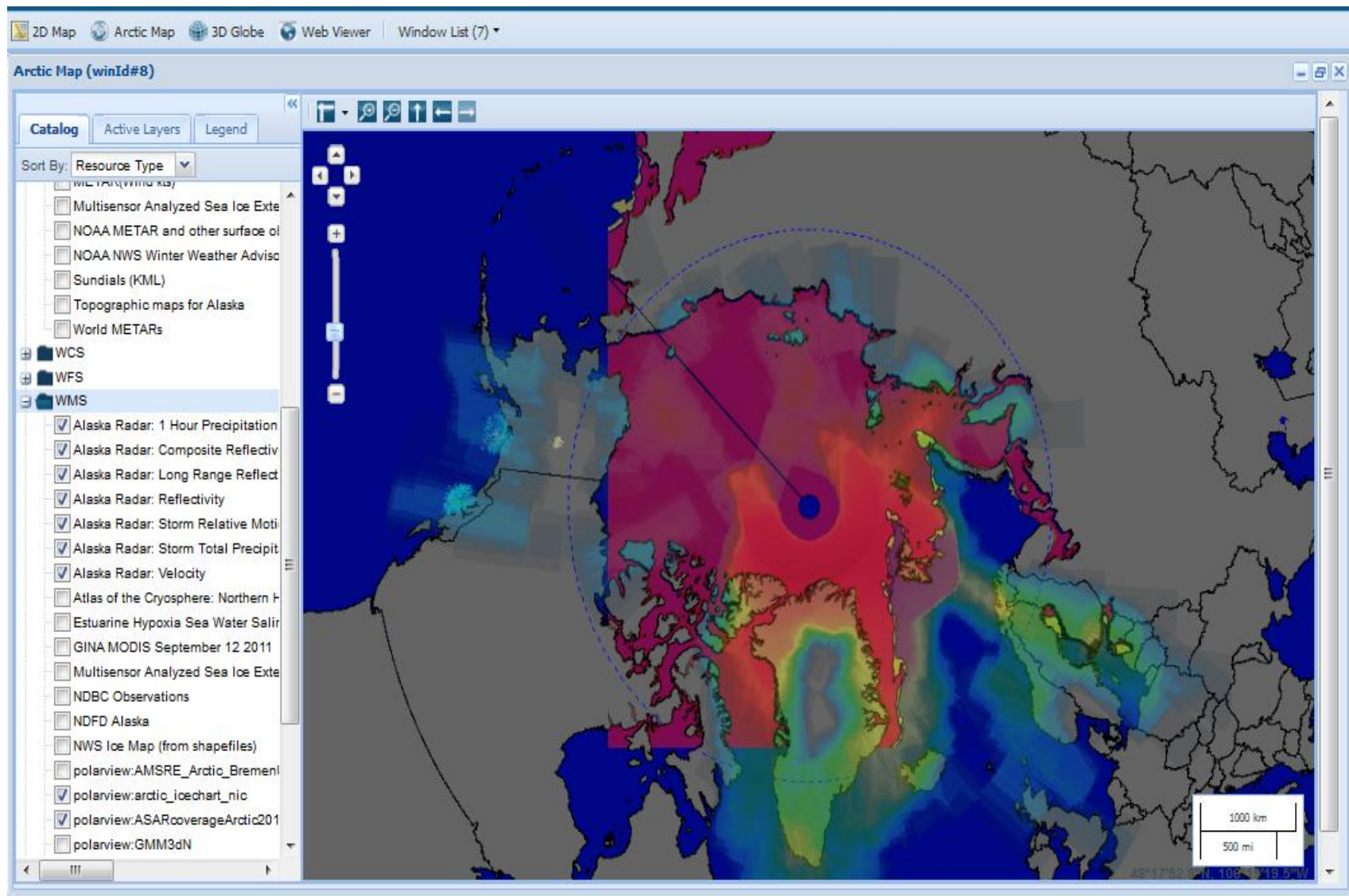
TAGS IN THEMATIC KEYWORDS

Earth Science Frozen Ground Glaciers Ice
Ice Sheets **Sea Ice Snow/Ice**
Snow Water Equivalent **Superstructure**
Icing Surface Weather Temperature
Wind Speed

A Web Based GIS System



Catalog



Layer Content Type

[HOME](#) / [CREATE CONTENT](#) / [CREATE LAYER](#)

Title: *

Vocabularies

No terms

Basic Information

Intellectual Originator Contact

Notifications

Resource Information

Resource Distribution Contact

Geographic Extent - Horizontal

Geographic Extent - Vertical

Temporal Extent

Previous Citation

Unique Metadata ID

Revision information New revision

Groups

Menu settings Not in menu

URL path settings Automatic alias

Resource Type: *

- Please choose - ▼

Resource Theme:

- None -
Current Observations
Forecast
Socio-Economic
Waypoints

Thematic Keywords:

Enter or select words that describe the resource's theme.

Add popular tags: [Snow/Ice +](#) [Wind Speed +](#) [Sea Ice +](#) [Surface
Weather +](#) [Temperature +](#) [Superstructure Icing +](#) [Tide +](#) [Snow
Water Equivalent +](#) [Space Weather +](#) [Aurora Borealis +](#)

Place Keywords:

Enter or select words that describe the resource spatially.

Add popular tags: [Arctic +](#) [Alaska +](#) [Canada +](#) [United States +](#)
[Oceans +](#) [Polar +](#) [Finland +](#) [Northern Hemisphere +](#) [Germany +](#)
[Cryosphere +](#)

Temporal Keywords:

Enter or select words that describe the resource temporal aspects.

Add popular tags: [Population +](#)

Issue Tracker

[HOME](#) / [ISSUES FOR ALL PROJECTS](#)

[Create a new issue](#) [Advanced search](#) [Statistics](#) [Subscribe](#)

Search for

Project

Status

Priority

Category

Project	Summary	Status	Priority	Category	Replies	Last updated	Assigned to	Created
ARAMSS Site	Option controls for 3D map new	active	normal	feature requests		2 days 5 hours		2 days 5 hours
ARAMSS Site	Map Grid layer for 2D, Arctic, 3D new	active	normal	feature requests		2 days 5 hours		2 days 5 hours
ARAMSS Site	Provide locally hosted base map layers updated	active	normal	feature requests	1 new	4 days 2 hours	mmceniry	1 week 4 days
ARAMSS Site	Disabling video on video chat also disables audio new	active	normal	bug reports		4 days 2 hours		4 days 2 hours
ARAMSS Site	Reinstatement of prior chat session new	active	normal	bug reports		4 days 3 hours		4 days 3 hours
ARAMSS Site	Unable to upload images to Issue tracker new	active	normal	feature requests		4 days 7 hours		4 days 7 hours
ARAMSS Site	Unable to share a white board with multiple users new	active	normal	feature requests		4 days 7 hours		4 days 7 hours
ARAMSS	Switching to another white board locale	active	normal	bug reports		4 days 7		4 days 7



Website: <http://ws3.itsc.uah.edu/infocasting/>

Invoke web services in distributed workflows.

Use the structured metadata in the **service cast** to auto-configure and invoke a call to web services of your choice.

To Create your first "scast", sign up and proceed to the authoring too. ([why sign up?](#))

Sign Up!



Partners: Many institutions in the Earth Science community are collaborating on advertising their web services using Service Casts. Author some "scasts" and your institution logo will be added here.

UAHuntsville
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

JPL



Discover New Services

Cryosphere Earth
Science Glaciers Ice Sheets
Oceans Polar Snow/Ice Snow Cover

[view all](#)

Search



Featured

Service Casts



Atlas of the Cryosphere: Southern Hemisphere WCS The National Snow and Ice Data Center (NSIDC) Atlas of the Cryosphere is a map server that provides data and information pertinent to the frozen regions of Earth, including monthly climatologies of sea ice extent and concentration, snow cover extent, and snow water...



Atlas of the Cryosphere: Northern Hemisphere WMS The National Snow and Ice Data Center (NSIDC) Atlas of the

Service Entry Content Type

Service Title

Service Feed Id

Service Summary

Service Semantics

Service Protocol

Service Keywords

Advertisements contain at least three typed links to:

1. Service interface description (e.g. WSDL or WADL)
2. Server endpoint
3. Documentation for humans

Links

[+]	Link Title	<input type="text"/>
	Link Relation Type	<input type="text" value="none"/>
	Link Location	<input type="text"/>
	Link Language	<input type="text" value="none"/>
	Link Return Type	<input type="text" value="none"/>

Service Cast Atom Feed



Subscribe to this feed using

Google

☐ Always use Google to subscribe to feeds.

Atlas of the Cryosphere: Northern Hemisphere

ITSC Services





[Atlas of the Cryosphere: Northern Hemisphere](#)

Sunday, July 10, 2011 8:58 PM

The National Snow and Ice Data Center (NSIDC) and information pertinent to the frozen regions of the Arctic and concentration, snow cover extent, and snow permafrost extent and classification, ice sheet elevation, and polar projections, the Atlas is divided into two sections: one for the Northern Hemisphere and one for the Southern Hemisphere. In addition to the data, the Geospatial Consortium, Inc. (OGC) protocols (WMS, WFS, etc.) for these data is also available at <http://nsidc.org/data/atlas/>. please contact NSIDC User Services at +1.303.492.3441. The server application was supported by NASA's Earth Science Data Center NASS-03099 and was developed using MapServer spatially-enabled internet applications. To cite the Atlas of the Cryosphere. Boulder, Colorado USA: National Snow and Ice Data Center <http://nsidc.org/data/atlas/>.

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  <title>Atlas of the Cryosphere: Northern Hemisphere WMS</title>
  <subtitle>ITSC Services</subtitle>
  <link href="http://www.ajinkyakulkarni.com/" />
  <link rel="self" href="http://ws3.itsc.uah.edu/infocasting/" />
  <updated>2011-07-10T20:58:35-05:00</updated>
  <author>
    <name/>
    <email>ajinkya@ajinkyakulkarni.com</email>
  </author>
  <id>http://ws3.itsc.uah.edu/infocasting</id>
  <entry>
    <title>Atlas of the Cryosphere: Northern Hemisphere</title>
    <id>uri:http://ws3.itsc.uah.edu/infocasting/node/970</id>
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    <scast:serviceSemantics>OGC.WMS</scast:serviceSemantics>
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    <link type="application/xml" rel="scast:interfaceDescription" title="Service inte
    <link type="application/OGC.WMS" rel="scast:serviceEndpoint" title="Server endpoi
    <link type="text/html" rel="scast:serviceDocumentation" title="Service documentat
    <content type="">
    </content>
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    </scast:physicalVariables>
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</feed>
```


Service Catalog

Scast Atom Feed Link, Title and Summary	Author	Service Keywords	Service Protocol	Service Semantics	Edit link	Delete link	Updated date	Type
 Haiti SDI Cascading WMS	ajinkya		HTTP	OGC.WMS	edit	delete	Sun, 07/10/2011 - 20:58	Service Cast
 Haiti SDI VGI WFS-T WFS-compliant web feature server by CubeWerx Inc.	ajinkya		HTTP	OGC.WFS	edit	delete	Sun, 07/10/2011 - 20:58	Service Cast
 Haiti SDI UN WFS WFS-compliant web feature server by CubeWerx Inc.	ajinkya		HTTP	OGC.WFS	edit	delete	Sun, 07/10/2011 - 20:58	Service Cast
 Haiti SDI OSM WFS WFS-compliant web feature server by CubeWerx Inc.	ajinkya		HTTP	OGC.WFS	edit	delete	Sun, 07/10/2011 - 20:58	Service Cast
 NASA GES DISC AIRS Web Coverage Service (WCS) 1.0.0 Supported by GMU This Web Coverage Service (WCS) is one of the multiple GES DISC data service instances used to provide gridded Level 3 AIRS data products, including daily, 8-day, and monthly products.	ajinkya	Aqua AIRS WCS NASA GES DISC	HTTP	OGC.WCS	edit	delete	Sun, 07/10/2011 - 20:58	Service Cast
 NASA GES DISC OMI Web Coverage Service (WCS) 1.0.0 Supported by GMU This Web Coverage Service (WCS) is one of the multiple GES DISC data service instances used to provide gridded Level 3 daily OMI data products.	ajinkya	Aqua OMI WCS NASA GES DISC	HTTP	OGC.WCS	edit	delete	Sun, 07/10/2011 - 20:58	Service Cast



Talkoot

Website: <http://miningsolutions.itsc.uah.edu/talkoot/>



TALKOOT

ITSC

UA HUNTSVILLE



GROUPS

- SAM Project
- Ontology Development & Application



USER LOGIN

Username: *

Password: *

Log in

- Request new password



PROJECTS

- › Portal Development
- › Services Development
- › Ontology Development
- Dashboard

Talkoot is a customizable "software appliance" to build collaborative portals for Earth Science services and analysis workflows. Talkoot is leveraging Drupal, an open architecture platform, to provide the core Content Management System capabilities required by an online collaborative portal. Drupal also has a vast array of specialized modules that have been developed by its user community to provide additional features. Talkoot is adding Earth science specific modules to provide data searching, processing, analysis plus many other capabilities.

Talkoot Overview

Fri, 05/21/2010 - 15:25 — RxR

On the emerging "Social Web," millions of people offer their knowledge online in a collective knowledge system comprising an active community of motivated members posting problems and solutions in blogs, forums, mailing lists, collaborative portals and other Web 2.0 technologies. A small but growing number of scientists and researchers are beginning to harness these Web 2.0 technologies as a transformative way of doing science. Since communication is at the heart of science, these technologies provide researchers easy mechanisms to critique, suggest, and share ideas, data and algorithms. These technologies complement formal means of sharing knowledge via conferences and published papers, where it is impossible to share all the research details, and where negative results are rarely included.

[⇒ Read more](#)

What can you do with Talkoot?

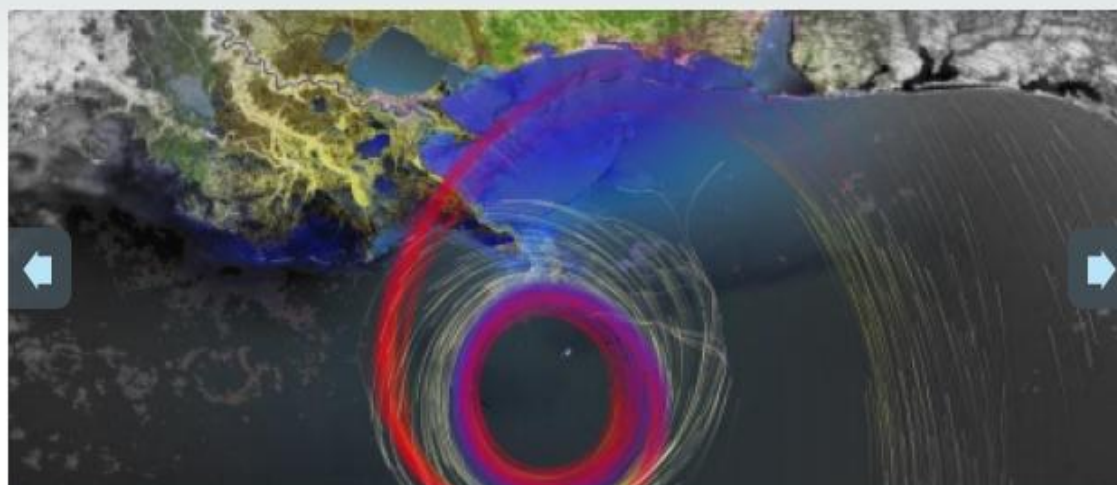
Mon, 05/24/2010 - 13:24 — RxR

- Talkoot allows you to install and configure an online collaborative portal faster, easier and cheaper.
- Talkoot allows you to customize features for your collaboration needs ranging from simply sharing reports/notes between project team members to sharing full analysis workflows with data within a community.
- Talkoot provides a core set of Drupal web 2.0 social networking features such as forums, chats, ratings, tagging, tag cloud for searches, etc to help you build an online community.
- Talkoot allows you to customize access and capabilities to different sets of users.



Northern Gulf Coastal Hazards Collaboratory

Website: <http://ngchc.org/>



CI Strategy 4: NG-CHC Development:

Develop CI to enable a regional-scale collaboratory with access to NG-CHC tools and services. Related Benefits: (1) Provides the research community unprecedented...

WELCOME

Louisiana, Mississippi, and Alabama have formed the Northern Gulf Coastal Hazards Collaboratory(NG CHC), a consortium to leverage their partnerships, proximity, and prior investments to advance the science and engineering of coastal hazards across the tri-state region and to address issues of national importance; including coastal system response, risk

ARCHIVE

MARCH 2012 (1)

FEBRUARY 2012 (6)

JANUARY 2012 (12)

DECEMBER 2011 (4)

JUNE 2011 (21)

MAY 2011 (1)

APRIL 2011 (4)

USERS TAGS

mississippi river (3) Oil spill (3) Modeling (3)
NGCHC Annual Meeting (2) sediment transport
(2) models (2) UNO (2) numerical modeling (2)
CI 2 SULIS (2) Isu (2) 2011 Annual Meeting (2)
evaluation metrics (2) informatics (2)
Evapotranspiration (2) CI Strategies 2 (1) CI 2
SULIS Milestone Activies (1) ASGS ADCIRC CI2
CERA (1) ASGS CERA web interface storm
surge wave guidance surge wind forecast

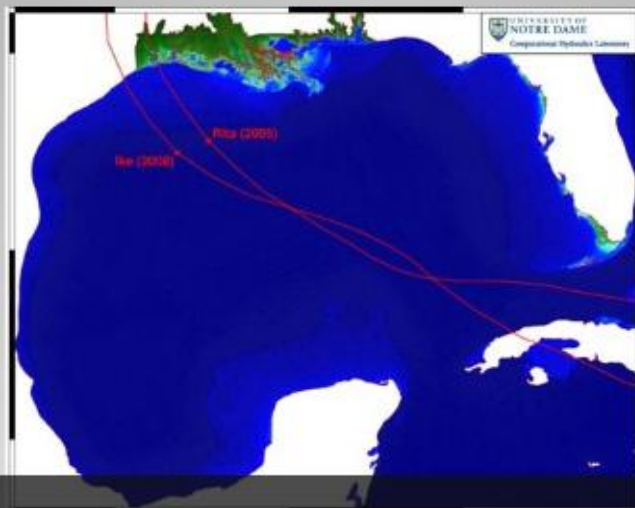
US IOOS Coastal Modeling Testbed

About: <http://testbed.sura.org/node/550>

Website: <http://testbed.sura.org/>



GoMx Storms - Hurricanes Rita and Ike



Coastal Inundation

- Substantial water level data sets including inland areas
- Leverage high quality wind fields, FEMA NFIP Studies

[READ MORE...](#)

Coastal Inundation

Better forecasts of inundation

Estuarine Hypoxia

Improved management of Chesapeake Bay resources and water quality

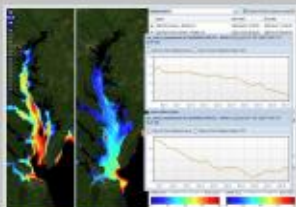
Cyberinfrastructure

Development of a National Cyberinfrastructure for the Super-Regional Testbed and Future Model Assessments

Shelf Hypoxia

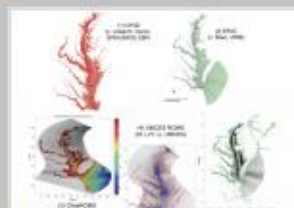
Better forecasts of dissolved oxygen in the Northern Gulf of Mexico

Model Explorer



Interactive Model and Observation Explorer

Models



Models used in the Testbed

Tools



Developed and Adapted Tools

Team Workspace



Testbed Collaborative Workspace



DEMAND

Website: <http://demand.itsc.uah.edu/drupal/>



DEMAND



This site provides information and collaboration for the NASA-funded DEMAND project. DEMAND (DSS Environment for Modeling of Atmospheric Nutrient Deposition) is a NASA-funded project utilizes recent [NASA Earth Science Research Results \(NASA ESRR\)](#) to aid in decision making processes related to water quality and nutrient inputs into aquatic ecosystems in coastal and inland areas of the state of Alabama. Decision support will be aided by hosting a hierarchy of products, derived from relevant NASA ESRR, on the [Virtual Alabama \(VA\)](#) system. The VA system is a Google Earth based system developed by the [Alabama Department of Homeland Security \(ALDHS\)](#) with the express purpose of decision support though sharing of information between different government agencies within the state of Alabama. Figure 1 below illustrates smoke plumes resulting from regional fires as an example of information provided by DEMAND.

DEMAND Links

- [About](#)
- [Data Visualization](#)
- [Decision Support System](#)
- [Earth Science Research](#)
- [Team](#)

Navigation

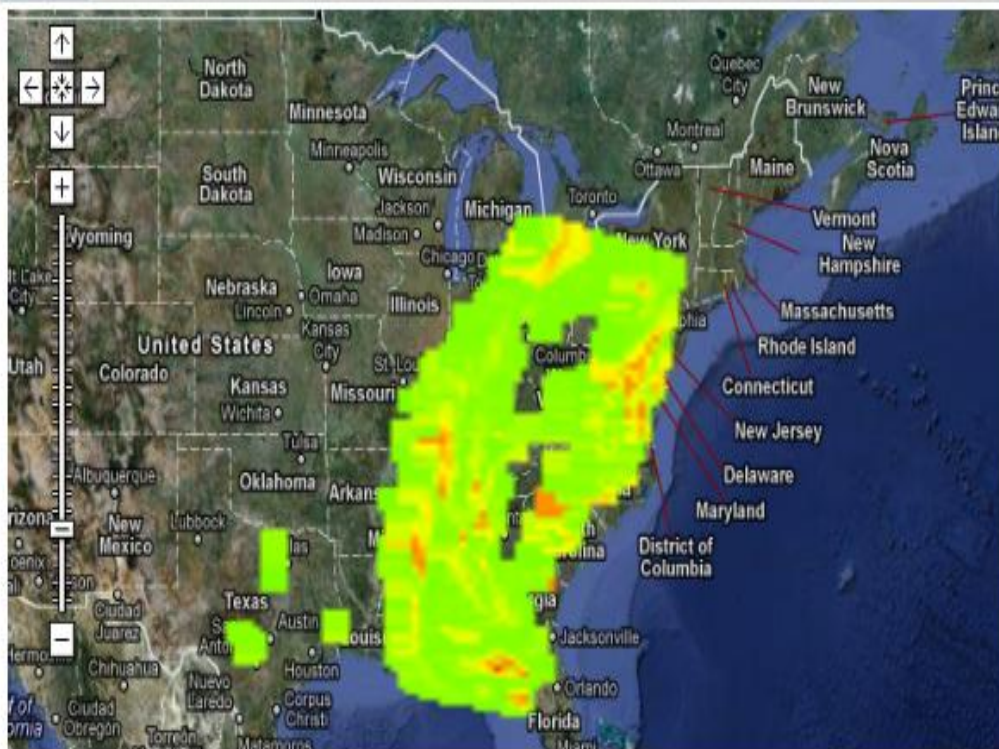
- [DEMAND Related Publications](#)

Related Links

- [NASA Earth Science Division](#)
- [Virtual Alabama](#)
- [Mobile Bay National Estuary Program](#)
- [Alabama Dept of Environmental Mgt](#)

<http://demand.itsc.uah.edu/drupal/>

Home



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- ☒ [Dry](#)
- ☒ [Total](#)
- ☐ [Sulphate](#)
- ☐ [Wet](#)
- ☐ [Dry](#)
- ☐ [Total](#)
- ☐ [Nutrient Dep\(w/Satellite\)](#)
- ☐ [Ammonium](#)
- ☐ [Wet](#)
- ☐ [Dry](#)
- ☐ [Total](#)
- ☐ [Nitrate](#)
- ☐ [Wet](#)
- ☐ [Dry](#)



Thanks for watching!